NA-813 / 813FL

Desktop Network Appliance

User's Manual

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Safety Approvals

- CE Marking
- FCC Class B

FCC Compliance

This equipment has been tested and complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. If not installed and used in accordance with proper instructions, this equipment might generate or radiate radio frequency energy and cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measurers:
Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio/TV technician for help.
Shielded interface cables must be used in order to comply with emission limits.

Safety Precautions

Before getting started, read the following important cautions.

1. Be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and place all electronic components in any static-shielded devices. Most electronic components are sensitive to static electrical charge.
2. Disconnect the power cords from the **NA-813 Series** before making any installation. Be sure both the system and the external devices are turned OFF. Sudden surge of power could ruin sensitive components. Make sure the **NA-813 Series** is properly grounded.
3. Do not open the system's top cover. If opening the cover for maintenance is a must, only a trained technician is allowed to do so. Integrated circuits on computer boards are sensitive to static electricity. To avoid damaging chips from electrostatic discharge, observe the following precautions:

    - Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This will help to discharge any static electricity on your body.
    - When handling boards and components, wear a wrist-grounding strap, available from most electronic component stores.

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CHAPTER 1
INTRODUCTION

This chapter contains general information and detailed specifications of the **NA-813 Series** Network Appliance Server. Chapter 1 contains the following sections:

- **General Description**
- **Features**
- **Specifications**
- **Dimensions**
- **I/O Outlets**

1.1 General Description

The **NA-813 Series** is a 1U and desktop network security hardware platform for VPN, firewall and other network security applications, which consists of NA-813 with support of Intel® ATOM N270 1.6GHz FSB 533; 512K L2 Cache. This platform supports the 1U desktop form factor, and the system supports DDR2 400/533 memory with single channel up to maximum 2 GB for one SODIMM slot. In the meantime, the platform also can support 4 Gigabit LAN ports which can provide best throughput. For the purpose to store event log data, it can deploy one 2.5" SATA HDD in internally. This platform can be easily enabled through application programs to make a user-friendly appliance for customers, and provide the highest ever performance of encryption and decryption.

1.2 Features

- Low power and high performance in network security field applications; NA-813 series supports Intel® ATOM N270 1.6GHz FSB 533; 512K L2 Cache.
- Supports four 10/100/1000Mbps Ethernet ports
- Supports BIOS redirected to COM port features
- Supports one 2.5" SATA Hard Disk
- Reasonable computing performance and throughput for processor and LAN ports
- Suitable for Network Appliance; VPN, network bandwidth controller, firewall and UTM

1.3 Specifications

1.3.1 System

- **System CPU**
  - Intel® ATOM N270 1.6GHz FSB 533; 512K L2 Cache processor onboard
- **BIOS**
  - AMI 8Mbit PnP Flash BIOS with function of BIOS redirected to COM port
- **System Memory**
  - One DDR2 400/533/667 SODIMM up to 2 GB
- **HDD Interface**
  - One 2.5" SATA HDD
- **Compact Flash**
  - One Compact Flash Type II
- **Network Interface**
  - Four 10/100/1000Mbps Ethernet (Intel® 82583V)
    One group lan by pass for optional
- **Watchdog Timer**
  - 255 stepping for porting
- **USB**
  - Two USB ports in the rear side
- **Console**
  - RS-232 Console port is the front side
- **Power**
  - 1 x 12V, 5A power adapter
- **OS Compatibility**
  - Redhat 2.6 Kernel

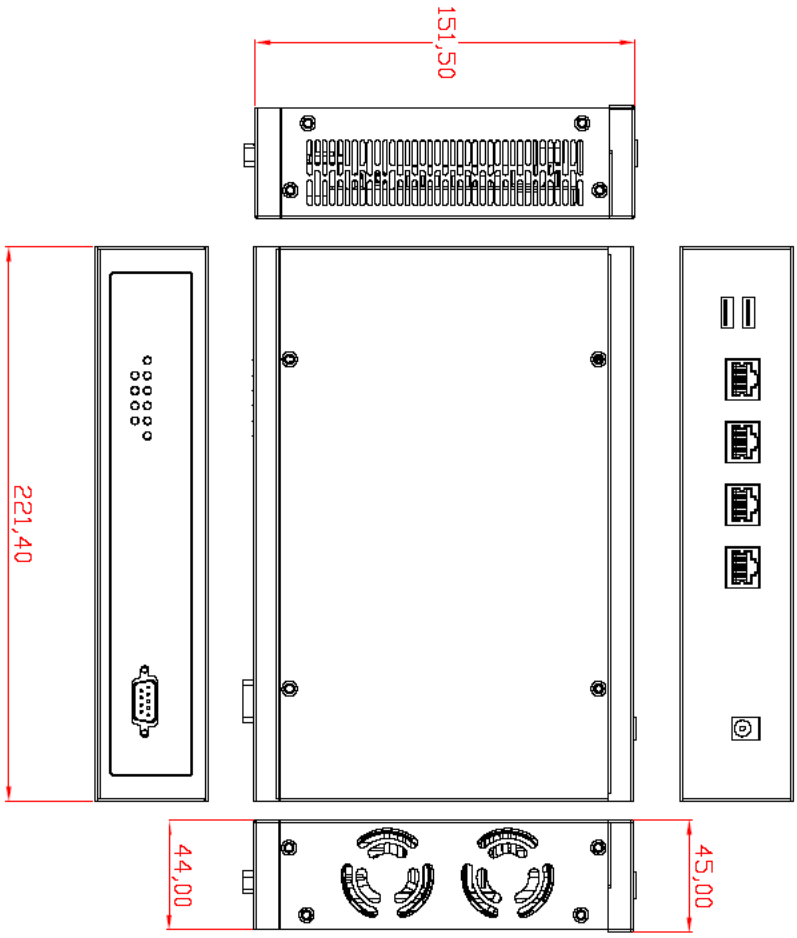
1.3.2 Mechanical / Environmental

- **Form Factor**
  - 1U Desktop for NA-813
  - 1U Desktop Fanless for NA-813FL
- **LED**
  - Power, HDD, Link/Act with transfer rate
- **Operation Temperature**
  - 0℃ ~ 45℃ (32℉ ~ 113℉)for NA-813
  - 0℃ ~ 40℃ (32℉ ~ 104℉)(with Wide Tempature HDD,RAM,CF)for NA-813FL
- **Storage Temperature**
  - -20℃ ~ 70℃ (-4℉ ~ 158℉)
- **Humidity**
  - 10% - 95% RH, non-condensing
- **Chassis Material**
  - Steel
- **Dimensions**
  - 44mm (1.73") (H) x 220mm (8.66") (W) x 151mm (5.94") (D) for NA-813
  - 44mm (1.73") (H) x 230mm (9.05") (W) x 152.1mm (5.98") (D) for NA-813FL
- **Weight**
  - 2.5kg (5.51 lb) / 2.9kg (6.39 lb)

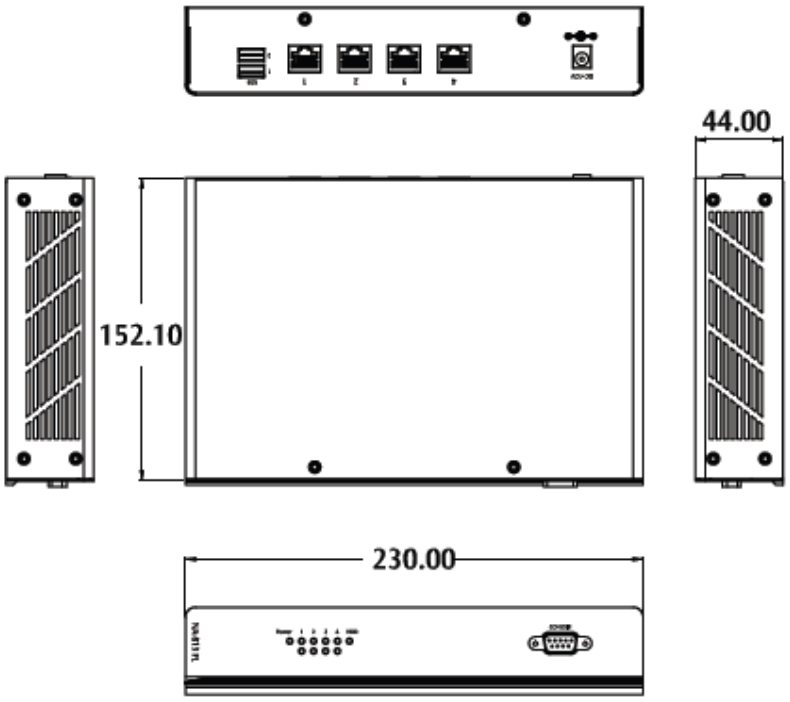
NOTE *All specifications and images are subject to change without notice.*

1.4 Dimensions and Outlines

NA-813



NA-813FL



1.5 I/O Outlets

Locate the front panel I/O outlets on the **NA-813 Series** server to connect serial and Ethernet interface devices.

1.5.1 Front Panel

NA-813

NA-813FL

- **Console port –** RS-232 Console port is for the command of line interface and of diagnostic support by P.O.S.T (Power on Self Test).
- **Power LED**
  It will be lighting when the server is powered on to perform

diagnostic tests and check a proper operation.

- **LAN Link LED**
  It will be lighting when a Twisted pair is connected to another Ethernet device on the port. It shows network transfer rate while making a connection.

- **Activity LED**
  It will be lighting when the server is transmitting or receiving a packet through the twisted pair ports.

- **HDD LED**
  The LED flashes when transmitting or receiving any signals.

- **Link/Active LED (Single color)for LAN port #1, port#2, port#3, port#4**
  1. The orange LED is on when the LAN port connection is working.
  2. The LED flashes when transmitting or receiving any signals to or from the appliance.
  3. The LED is dark when the appliance is off.

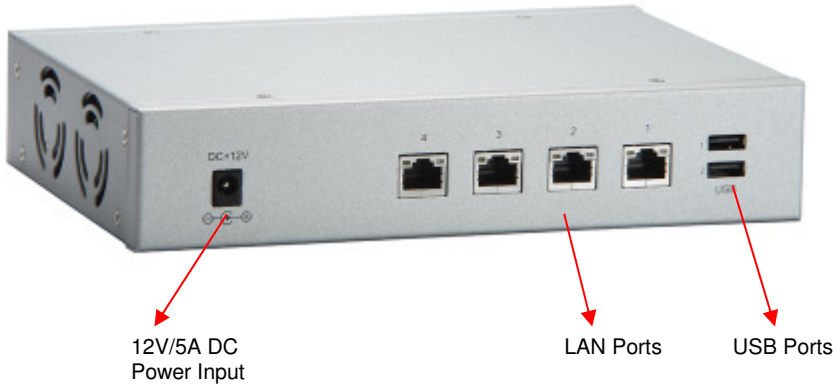
- **Transmitted LED for LAN port #1, port#2, port#3, port#4**
  1. The double-color LED light indicates 10/100/1000Mbps transfer rate.

`Transfer Rate	LED Light Color
10Mbps	Dark
100Mbps	Green
1000Mbps	Amber

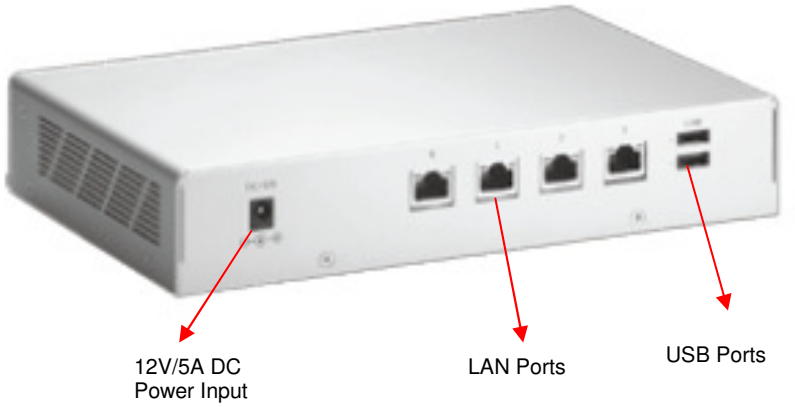
  2. When the amber-color LED light is radiating, it should be 1000Mbps transfer rate at this moment.
  3. When the green-color LED light is radiating, it should be 100Mbps transfer rate at this moment
  4. If the LED is dark and Link/Active LED is light on or flashing, it should be 10Mbps transfer rate.
  5. When this LED and Link/Active LED both are dark. No networking devices are attached

1.5.2 Rear Panel

NA-813



NA-813FL



MEMO

CHAPTER 2
HARDWARE DESCRIPTION

The **NA-813 Series** are convenient for your various hardware configurations. The chapter 2 will help you get familiar with the hardware.

2.1 Checklist

The package bundled with your **NA-813 Series** should contain the following items:

- The **NA-813 Series** network appliance hardware platform
- DC Power Adapter x 1
- Utility CD (including this User's Manual and driver, sample code) x 1
- Mounting screws for disk drive and additional screws for this appliance's spareparts
- Installed NA-813 cable kits (S-ATA cable x 1, S-ATA power cable x 1)
- Optional cable (Console cable x 1, PS/2 keyboard and mouse cable x 1, VGA cable x 1)
- Plastic stand for stack–up x 4

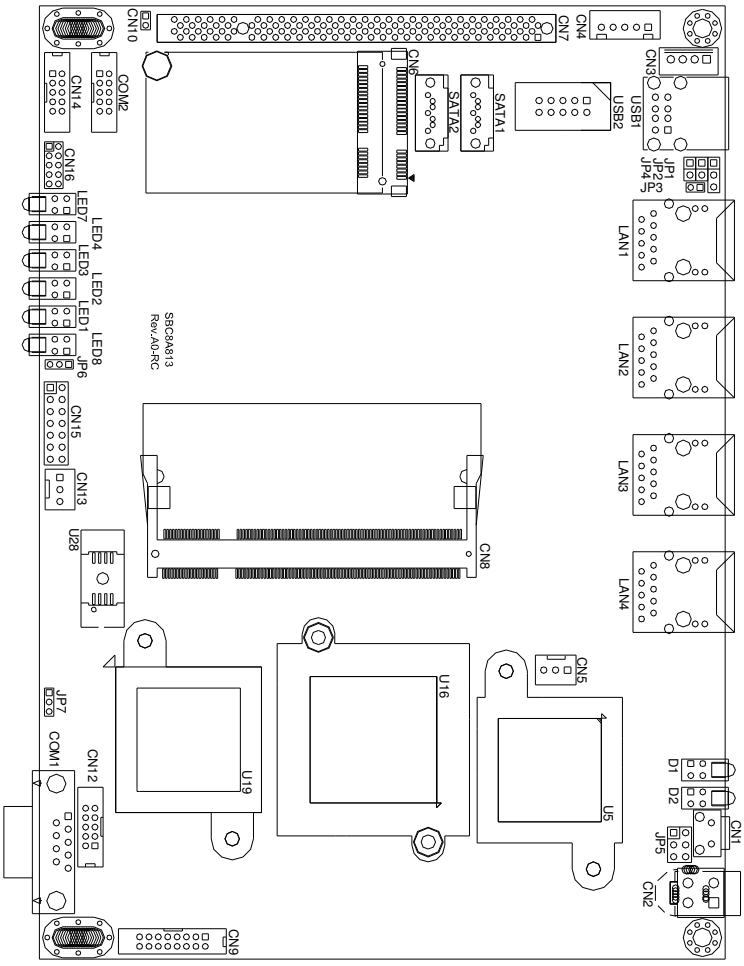
If you can not find this package or any items are missing, please contact AXIOMTEK distributors immediately. If you order any optional components, the package might contain those additional hardware or documents accordingly.

2.2 Memory Module (SODIMM)

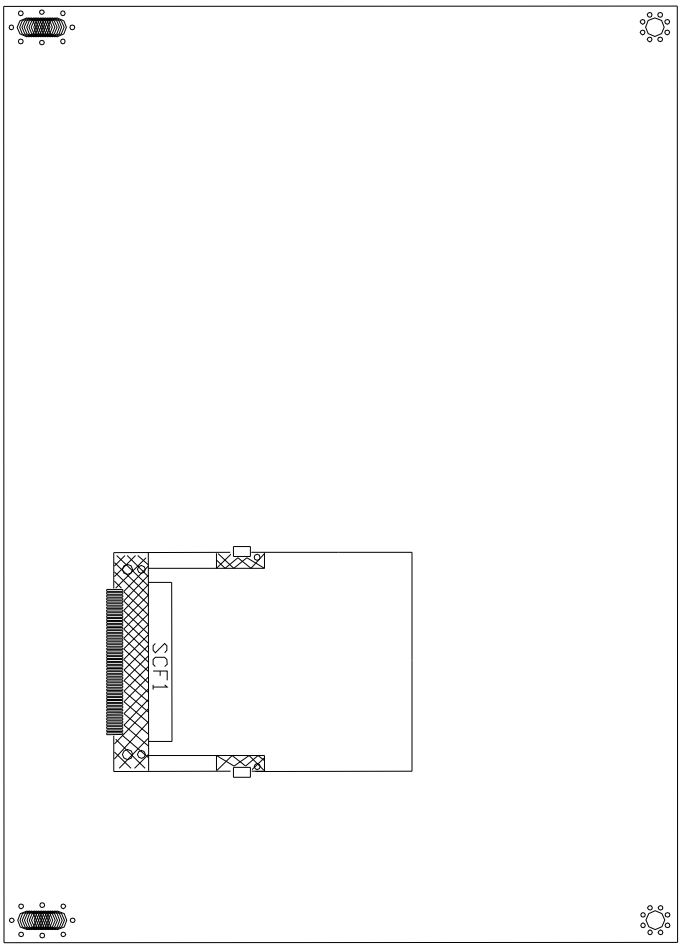
The main board supports one DDR2 400/533/667 SODIMM socket. Maximum memory capacity is up to 2GB None-ECC unbuffer memory. The following steps show you how to install the memory modules:

1 Push down each side of the SODIMM socket.
2 Align the memory module with the socket that notches of memory module must match the socket keys for a correct intallation.
3 Install the memory module into the socket and push it firmly down until it is fully seated. The socket latches are levered upwards and clipped on to the edges of the DIMM.
4 Install any remaining SODIMM modules.

2.3 Board Layout



Component Side



Solder Side

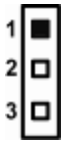
2.4 Jumper Settings

This section provides the information about jumpers and connectors of **NA-813 Series**. Proper jumper settings configure the main board in this appliance to meet your application purpose. We are herewith listing a summary table of all jumpers and default settings for onboard devices, respectively.

Jumper	Definition	Jumper Setting
JP1	LAN By-Pass Function	1-2 : Disable 2-3 : Always By-pass Open: (Default) Trigger By JP2 or JP4 or WDT (Appendix A)
JP2	LAN By-Pass Trigger 1	LAN by-pass Trigger 1 GPO default Hi (By-pass Disable) Default : Short
JP3	Auto Power-On	Close : Always Off Open : Always On (Default)
JP4	LAN By-Pass Trigger 2	LAN by-pass Trigger 2 GPO default Low (By-pass Enable) Default : Open
JP6	CF Power Select	1-2 : 3.3V (Default) 2-3 : 5V
JP7	Clear CMOS	1-2 : Normal (Default) 2-3 : Clear CMOS

2.4.1 LAN by Pass Function Jumper (JP1)

Use this jumper to select the LAN Bypass Function.

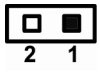
Description	Function	Jumper Setting
LAN By-Pass Function	Disabled	
	Always By-Pass	
	Trigger By JP2 or JP4 (Default)	

2.4.2 LAN By-Pass Trigger 1, 2 (JP2, JP4)

Description	Function	Jumper Setting
LAN Bypass Trigger 1,2 Function	Low Level GPIO	
	High Level GPIO (Default)	

NOTE *If the jumper setting is "Low Level GPIO", LAN Bypass function will stil be started even when power supply is normally input. The default setting is "High Level GPIO" that LAN Bypass function is not working when power supply is normally input.*

2.4.3 Auto Power-On Jumper (JP3)

Description	Function	Jumper Setting
Auto Power-On	Always Off	
	Always On (Default)	

2.4.4 CF Power Select Jumper (JP6)

Connect the device's power cable to this jumper and correctly set it for the CompactFlash™ Card.

Description	Function	Jumper Setting
CF Power Select	3.3V (Default)	
	5V	

2.4.5 Clear CMOS Jumper (JP7)

You may need to use this jumper is to clear the CMOS memory if incorrect settings in the Setup Utility.

Description	Function	Jumper Setting
CMOS Clear	Normal (Default)	
	Clear CMOS	

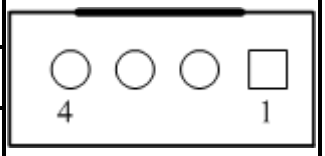
2.5 Connectors

Connectors connect the board with other parts of the system. Loose or improper connection might cause problems. Make sure all connectors are properly and firmly connected. Here is a summary table shows you all connectors on the main board.

Function Description	Connector
DC Jack Connector	CN2
Power Output Connector	CN3
2.5" SATA HDD Power or LCM Connector	CN4
DDRII Connector	CN8
VGA Connector	CN9
KB/MS Connector	CN14
COM Port 1	COM1
SATA1 Connector	SATA1
USB0,1	USB1

2.5.1 Power Output Connector (CN3)

Pin	Signal
1	+12V
2	GND
3	GND
4	+5V



2.5.2 2.5" SATA HDD Power or LCM Connector (CN4)

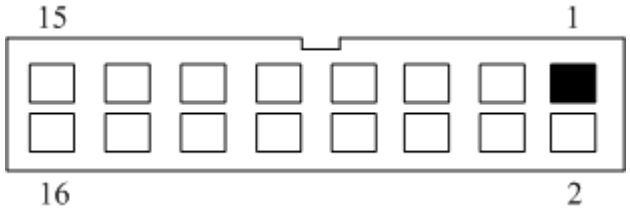
Support 2.5" SATA HDD power or LCM module

Pin	Signal
1	+5V
2	RXD of COM2
3	No Connection
4	TXD of COM2
5	GND

2.5.3 VGA (CN9)

The VGA connector **CN9** on the board is a 16-pin connector.

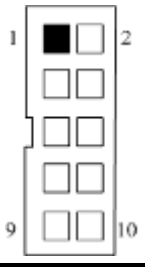
Pin	Signal	Pin	Signal
1	Red	2	GND
3	Green	4	NC
5	Blue	6	GND
7	+5V	8	DDC DAT
9	GND	10	GND
11	GND	12	Horizontal Sync
13	GND	14	Vertical Sync
15	DDC CLK	16	NC



2.5.4 KB/MS Connector (CN14)

The board supports a keyboard and Mouse interface. Connector CN14 is for PS/2 keyboard Connection VIA "Y" Cable.

Pin	Signal	Pin	Signal
1	VCC	2	KBDATA
3	KBCLK	4	GND
5	VCC	6	VCC
7	MSDATA	8	MSCLK
9	GND	10	NC

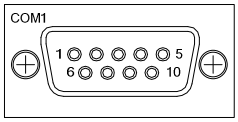


2.5.5 Serial Port1 Connector (COM1)

The COM1 Port connector is a standard DB-9 connector.

Pin	Signal
1	DCD, Data carrier detect
2	RXD, Receive data
3	TXD, Transmit data
4	DTR, Data terminal ready
5	GND, ground
6	DSR, Data set ready
7	RTS, Request to send
8	CTS, Clear to send
9	RI, Ring indicator

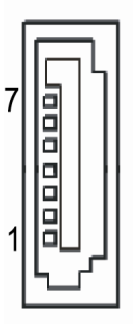
COM1



2.5.6 SATA Port 1 Connector (SATA1)

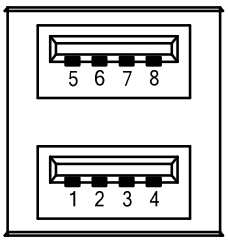
The SATA connector is for high-speed SATA interface port and it can be connected to hard disk device.

Pin	Signal
1	GND
2	SATA_TX+
3	SATA_TX-
4	GND
5	SATA_RX-
6	SATA_RX+
7	GND



2.5.7 USB Port Connector (USB1)

Pin	Signal	Pin	Signal
1	+5VSBY	5	+5VSBY
2	USB D0-	6	USB D1-
3	USB D0+	7	USB D1+
4	Ground (GND)	8	Ground (GND)



CHAPTER 3
AMI BIOS SETUP UTILITY

This chapter provides users with detailed description how to set up basic system configuration through the AMIBIOS8 BIOS setup utility.

3.1 Starting

To enter the setup screens, follow the steps below:

1. Turn on the computer and press the <Del> key immediately.
2. After you press the <Delete> key, the main BIOS setup menu displays. You can access the other setup screens from the main BIOS setup menu, such as the Chipset and Power menus.

3.2 Navigation Keys

The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process.

These keys include <F1>, <F10>, <Enter>, <ESC>, <Arrow> keys, and so on.

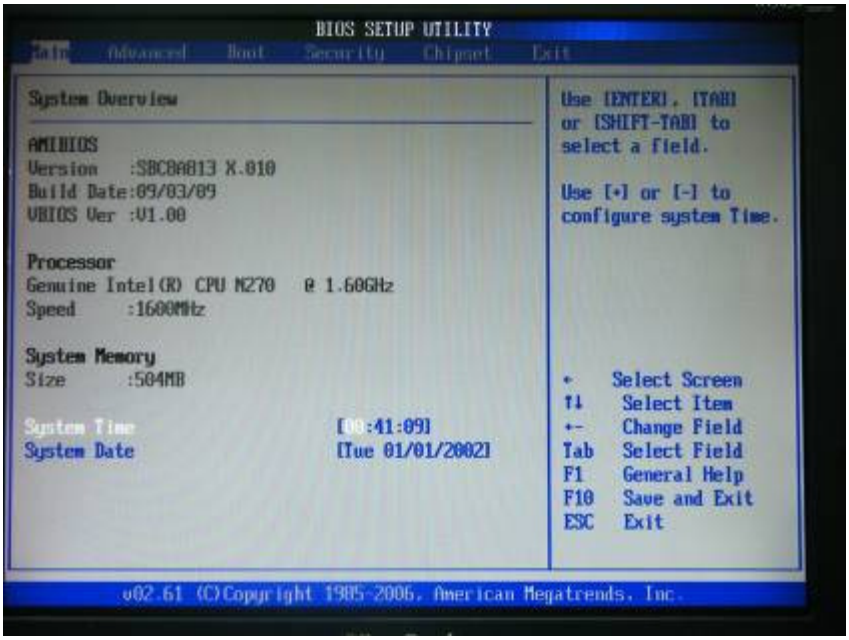
Note *Some of navigation keys differ from one screen to another.*

← Left/Right	The Left and Right <Arrow> keys allow you to select a setup screen.
↑↓ Up/Down	The Up and Down <Arrow> keys allow you to select a setup screen or sub-screen.
+– Plus/Minus	The Plus and Minus <Arrow> keys allow you to change the field value of a particular setup item.
Tab	The <Tab> key allows you to select setup fields.
F1	The <F1> key allows you to display the General Help screen.

F10	The <F10> key allows you to save any changes you have made and exit Setup. Press the <F10> key to save your changes.
Esc	The <Esc> key allows you to discard any changes you have made and exit the Setup. Press the <Esc> key to exit the setup without saving your changes.
Enter	The <Enter> key allows you to display or change the setup option listed for a particular setup item. The <Enter> key can also allow you to display the setup sub- screens.

3.3 Main Menu

When you first enter the Setup Utility, you will enter the Main setup screen. You can always return to the Main setup screen by selecting the Main tab. There are two Main Setup options. They are described in this section. The Main BIOS Setup screen is shown below.



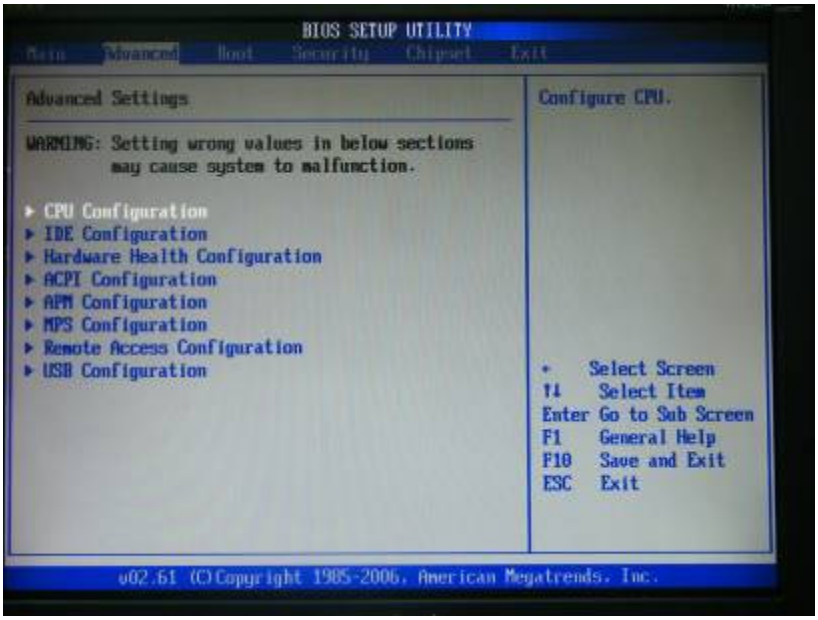
- **System Time/Date**
  Use this option to change the system time and date. Highlight *System Time* or *System Date* using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time is entered in HH:MM:SS format.

3.4 Advanced Menu

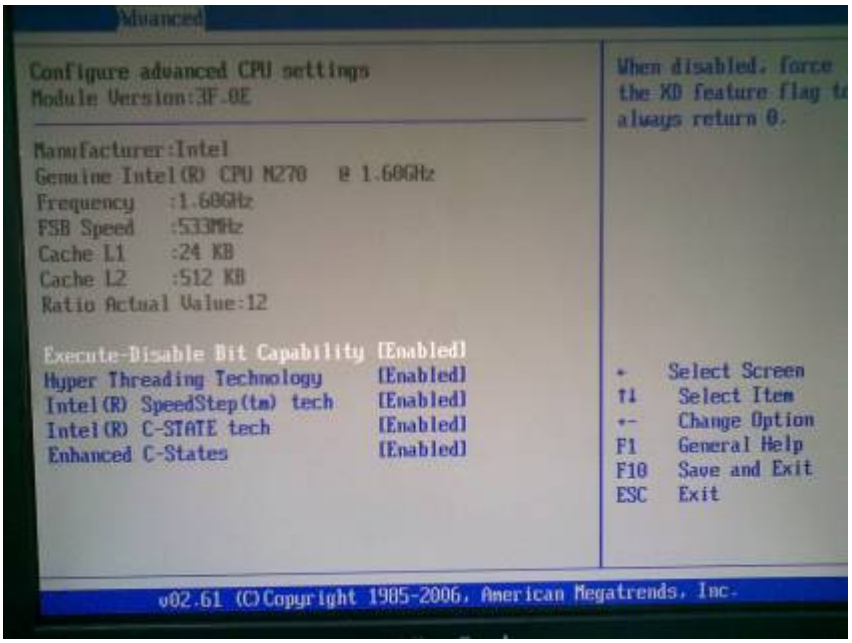
The Advanced menu allows users to set configuration of the CPU and other system devices. You can select any of the items in the left frame of the screen to go to the sub menus:

- CPU Configuration
- IDE Configuration
- Hardware Health Configuration
- ACPI Configuration
- APM Configuration
- MPS Configuration
- Romote Access Configuration
- USB Configuration

For items marked with "►", please press <Enter> for more options.



- **CPU Configuration**
  This screen shows the CPU Configuration, and you can change the value of the selected option.



  - **Execute-Disable Bit Capability**
    Intel's Execute Disable Bit Capability can help prevent certain classes of malicious buffer overflow attacks when combined with a supporting operating system. This function allows the processor to classify areas in memory by where application code can execute and where it cannot. When a malicious worm attempts to insert code in the buffer, the processor disables code execution, preventing damage and worm propagation. When you set "Disabled", force the XD feature flag to always return 0.
  - **Hyper Threading Technology**
    This item is an innovative design from Intel that enables multi-threaded software applications to process threads in parallel within each processor resulting in increased utilization of processor execution resources. It is to place

two logical processors into a single CPU die.
Enabled: Windows XP and Linux (OS optimized for Hyper Threading Technology)
Dislabled: for other OS(OS not optimized for Hyper-Threading Technology)

- **Intel® SpeedStep™ Tech**
  Enhanced Intel SpeedStep Technology allows the system to dynamically adjust processor voltage and core frequency, which can result in decreased average power consumption and decreased average heat production. This feature can help address power concerns in companies with sites approaching the limits of bounded electrical infrastructures. Combined with existing power saving features, Enhanced Intel SpeedStep Technology can provide an excellent balance between providing power when you need it and conserving it when you don't.
  Disabled: Disable GV3
  Enabled: Enable GV3

- **Intel® C-STATE Tech**

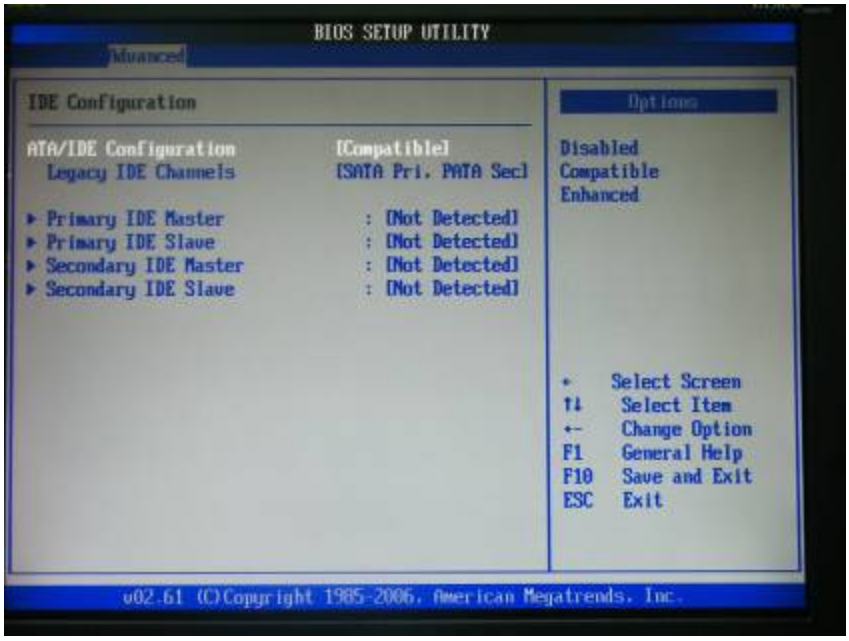
  The C-state is an idle state. Modern processors have several different C-states representing increasing amounts of "stuff" shut down. The basic idea of these modes is to cut the clock signal and power from idle units inside the CPU. The more units you stop (by cutting the clock), reduce the voltage or even completely shut down, more energy you save, but more time is required for the CPU to "wake up" and be again 100% operational.

  Enabled Cstate: CPU idle is set to C2. C3. C4 State

- **Enhanced C-States**

  CState: CPU idle is set to Enhanced C-States.

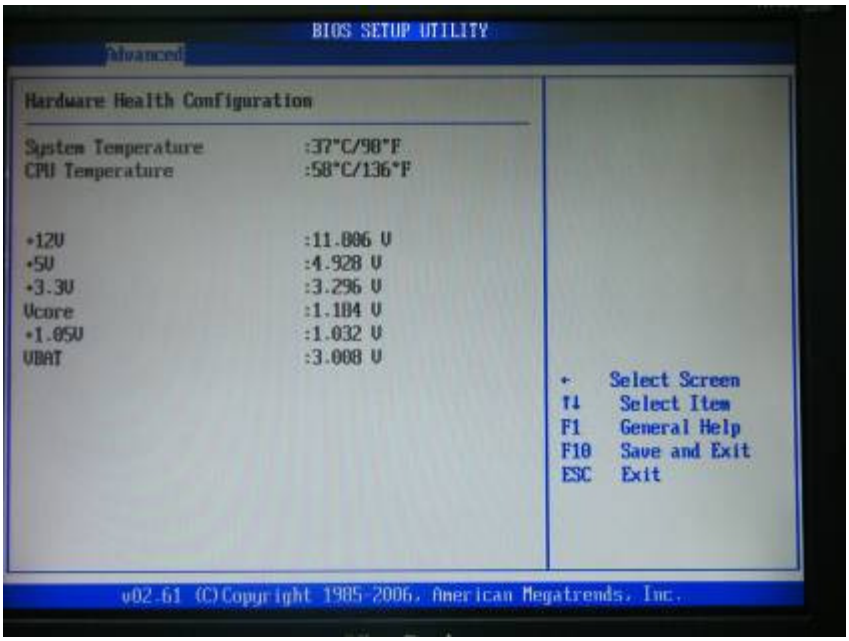
- **IDE Configuration**
  You can use this screen to select options for the IDE Configuration, and change the value of the selected option. A description of the selected item appears on the right side of the screen. For items marked with "►", please press <Enter> for more options.



  - **ATA/IDE Configuration**
    Use this item to specify the integrated IDE controller. There are three options for your selection: Disable, Compatible and Enhanced.
  - **Legacy IDE Channels**
    When the ATA/IDE Configuration is set to Compatible, this item will be displayed.
  - **Primary/Secondary/IDE Master/Slave**
    Select one of the hard disk drives to configure IDE devices installed in the system by pressing <Enter> for more options.

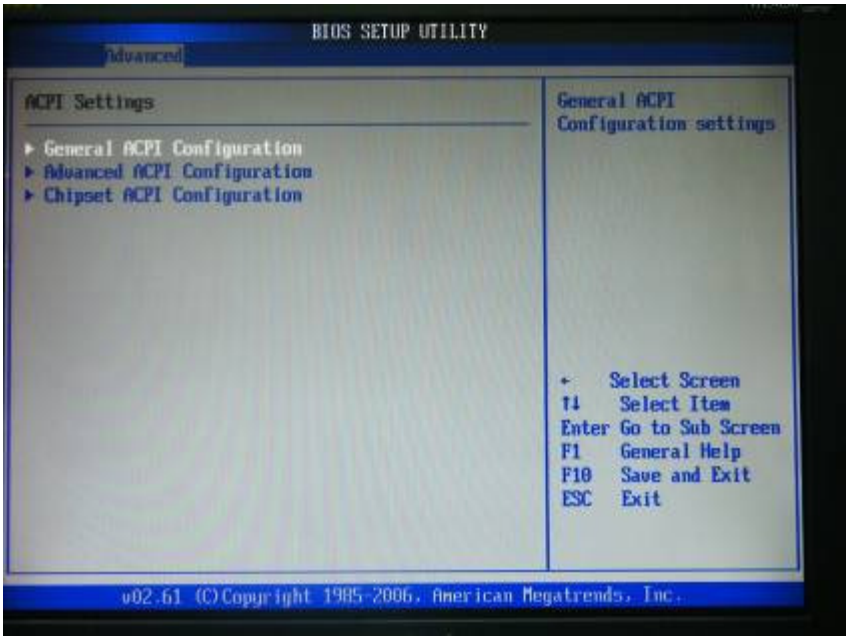
- **Hardware Health Configuration**

This screen shows the Hardware Health Configuration, and a description of the selected item appears on the right side of the screen

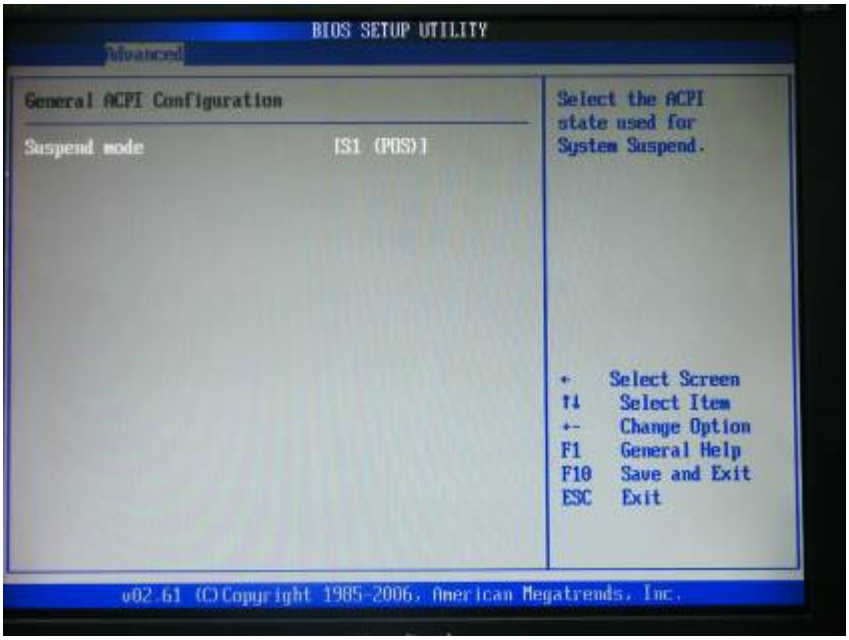


- **System Temperature**
  Show you the current system temperature.
- **CPU Temperature**
  These read-only fields show the functions of the hardware thermal sensor by CPU thermal diode that monitors the chip blocks to ensure a stable system.
- **Vcore 12V / 5V / 3.3V**
  Show you the voltage of 12V / 5V / 3.3V and etc.

- **ACPI Settings**
  You can use this screen to select options for the ACPI Settings, and change the value of the selected option. A description of the selected item appears on the right side of the screen.



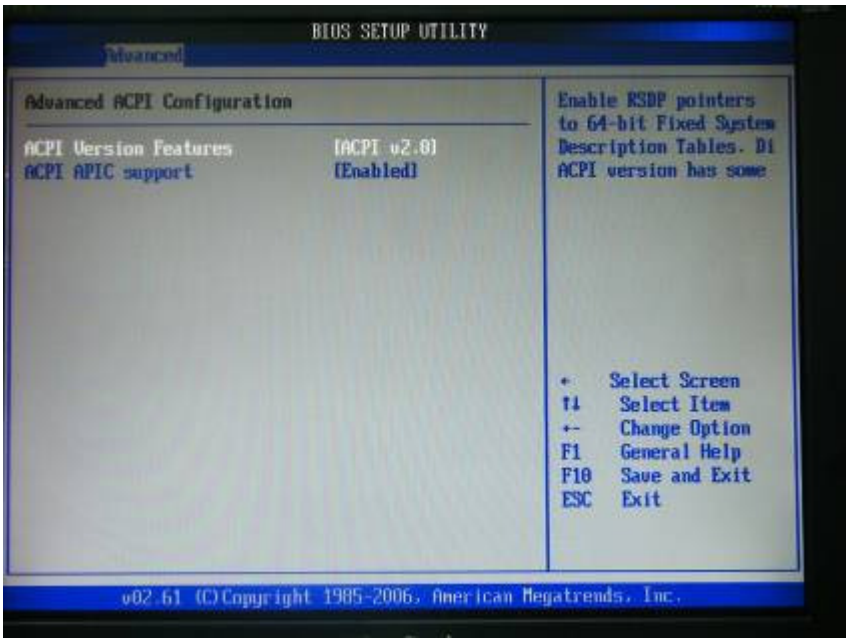
- **Gerneral ACPI Configuration**
  Scroll to this item and press <Enter> to view the General ACPI Configuration sub menu, which contains General ACPI (Advanced Configuration and Power Management Interface) options for your configuration.



  - **Suspend mode**
    After the selected period of system inactivity (1 minute to 1 hour), all devices except the CPU shut off. The default value is "S1".

Disabled	System will never enter SUSPEND mode
1/2/4/6/8/10/20/30/40 Min/1 Hr	Defines the continuous idle time before the system entering SUSPEND mode. If any item defined in (J) is enabled & active, SUSPEND timer will be reloaded.

- **Advanced ACPI Configuration**
  Scroll to this item and press <Enter> to view the Advanced ACPI Configuration sub menu, which contains Advanced ACPI (Advanced Configuration and Power Management Interface) options for your configuration.


BIOS SETUP UTILITY
Advanced
Advanced ACPI Configuration
ACPI Version Features [ACPI v2.0]
ACPI APIC support [Enabled]
Enable RSDP pointers to 64-bit Fixed System Description Tables. Di ACPI version has some
← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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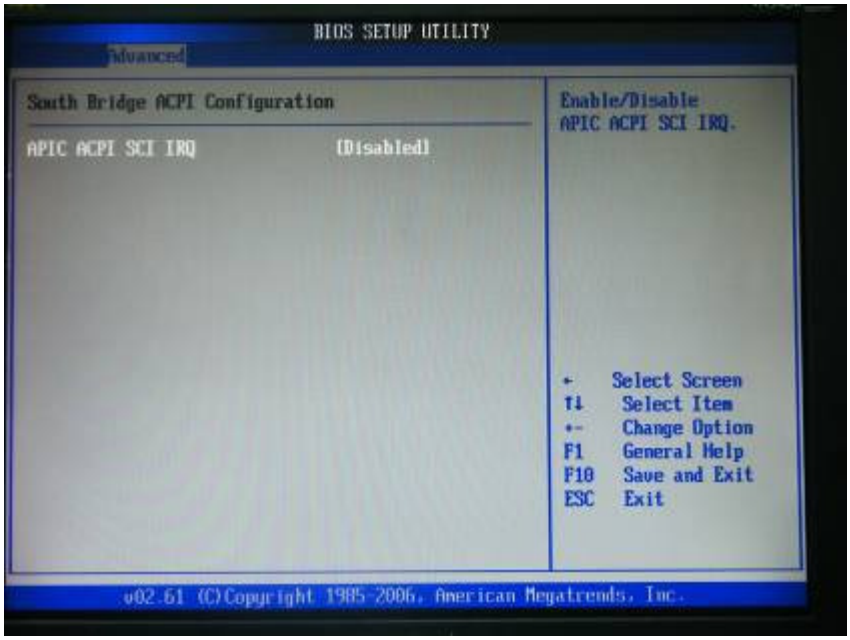
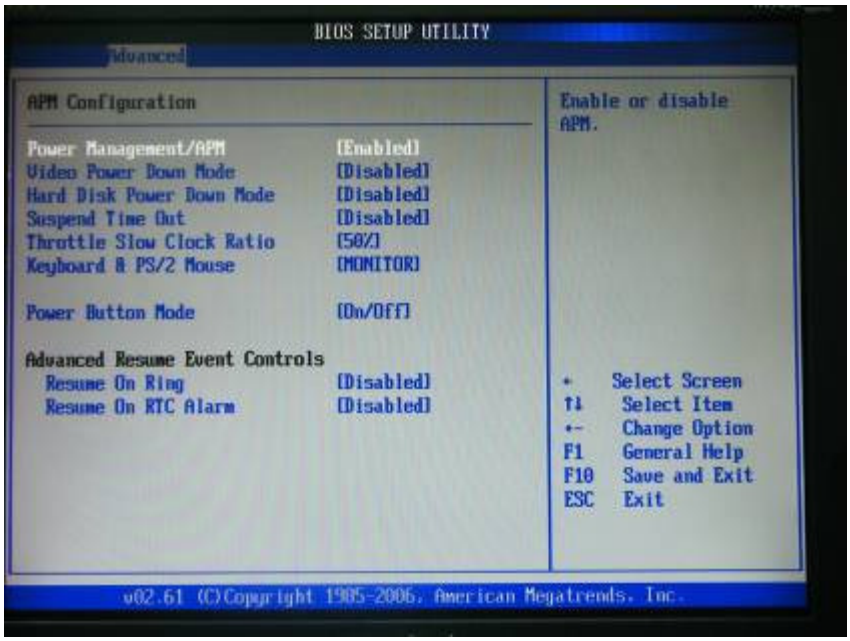
  - **ACPI Version Features**
    This item shows ACPI's version.
  - **ACPI APIC support**
    Use this item to enable or disable APIC (Advanced Programmable Interrupt Controller) mode that provides symmetric multi-processing (SMP) for systems.

- **South Bridge ACPI Configuration**
  Scroll to this item and press <Enter> to view the Chipset ACPI Configuration sub menu, which contains Chipset ACPI (Advanced Configuration and Power Management Interface) options for your configuration.



- **APM Configuration**
  You can use this screen to select options for the APM Configuration, and change the value of the selected option. A description of the selected item appears on the right side of the screen.



  - **Power Management/APM**
    Set this item to allow Power Management/APM support. The default setting is *Enabled*.

Disabled	Set this item to prevent the chipset power management and APM (Advanced Power Management) features.
Enabled	Set this item to allow the chipset power management and APM (Advanced Power Management) features. This is the default setting.

- **Video Power Down Mode**
  This option specifies the Power State that the video subsystem enters when the BIOS places it in a power saving state after the specified period of display inactivity has expired. The default setting is *Suspend*.

Disabled	This setting prevents the BIOS from initiating any power saving modes concerned with the video display or monitor.
Suspend	This option places the monitor into suspend mode after the specified period of display inactivity has expired. This means the monitor is not off. The screen will appear blacked out. The standards do not cite specific power ratings because they vary from monitor to monitor, but this setting use less power than Standby mode. This is the default setting.

- **Suspend Time Out**
  This option specifies the length of time the system waits before it enters suspend mode. The default setting is *Disabled*.

Disabled	This setting prevents the system from entering suspend mode. This is the default setting.
1 Min	Set this item to allow the computer system to enter suspend mode after being inactive for 1 minute.
4 Min	Set this item to allow the computer system to enter suspend mode after being inactive for 4 minutes.
10 Min	Set this item to allow the computer system to enter suspend mode after being inactive for 10 minutes.

- **Throttle Slow Clock Ratio**
  Use this item to specify the speed of the system clock when running the power saving states.

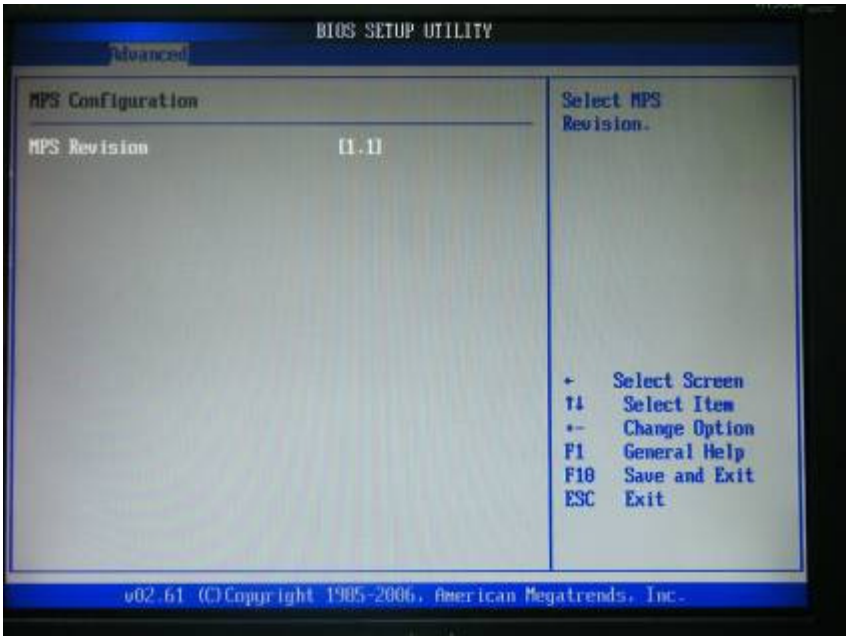
- **Power Button Mode**
  This option specifies how the externally mounted power button on the front of the computer chassis is used. The default setting is *On/Off.*

On/Off	Pushing the power button turns the computer on or off. This is the default setting. This is the default setting.
Suspend	Pushing the power button places the computer in Suspend mode or Full On power mode.

- **Resume On Ring**
  This item enables or disables the function of Resume On Ring that resumes the system through incoming calls.

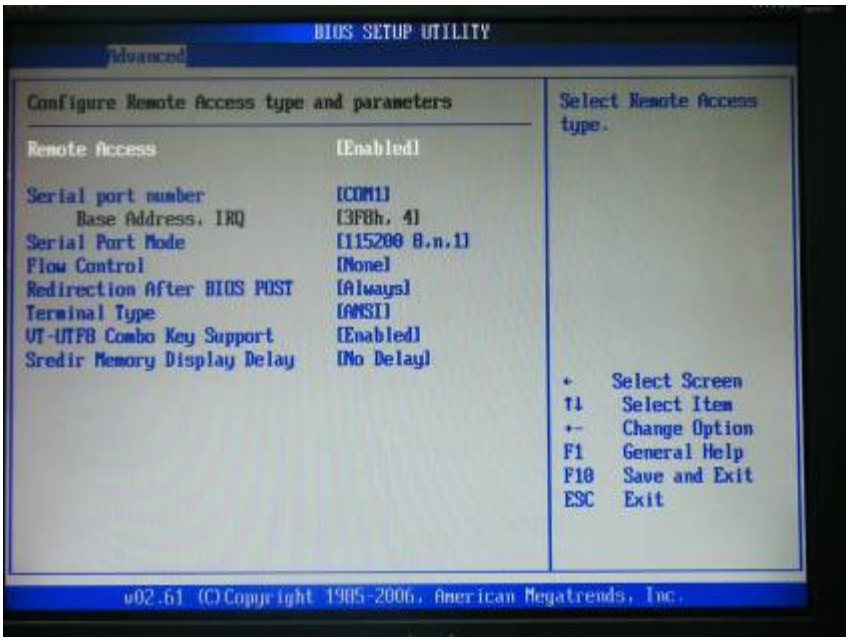
- **Resume On RTC Alarm**
  You can set "Resume On RTC Alarm" item to enabled and key in Data/time to power on system.

- **MPS Configuration**
  This screen shows the MPS (Multi Processor Specification) Configuration, and you can change its value. A description of the selected item appears on the right side of the screen.



  - **MPS Revision**
    Use this item to select MPS (Multi Processor Specification) Revision 1.1 or 1.4. The default setting is *1.1*.

- **Remote Access**

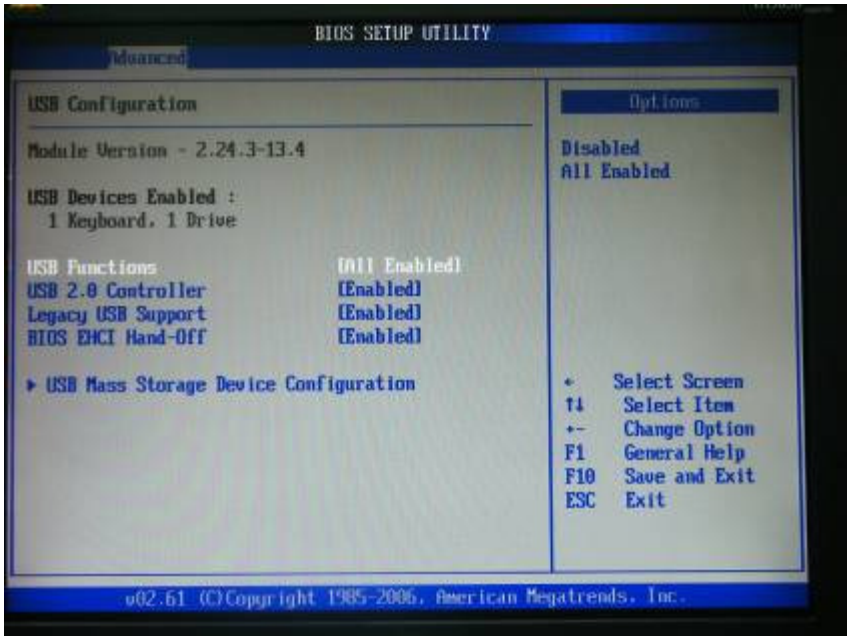


  - **Serial port number**
    This item specifies the base I/O port address and Interrupt Request address of serial port 1. The Optimal setting is *3F8/IRQ4*.
  - **Serial Port Mode**
    This item allows you to setup the data transfer rate for the console port. The default value is 115200. Available options are "*9600*", "*19200*", "*38400*", "*57600*" and "*115200*".
  - **Flow Control**
    This item allows you to select flow control for console redirection. The configuration options: None, Hardware and Software.
  - **Redirection After BIOS POST**
    Use this item to enable or disable the function of Console Redirection, which allows you maintain a system from a remote location. The default setting is *Always*.
  - **Therminal Type**

This item allows you to select the target therminal type. Configuration options: ANSI, VT100 and VT-UTF8.

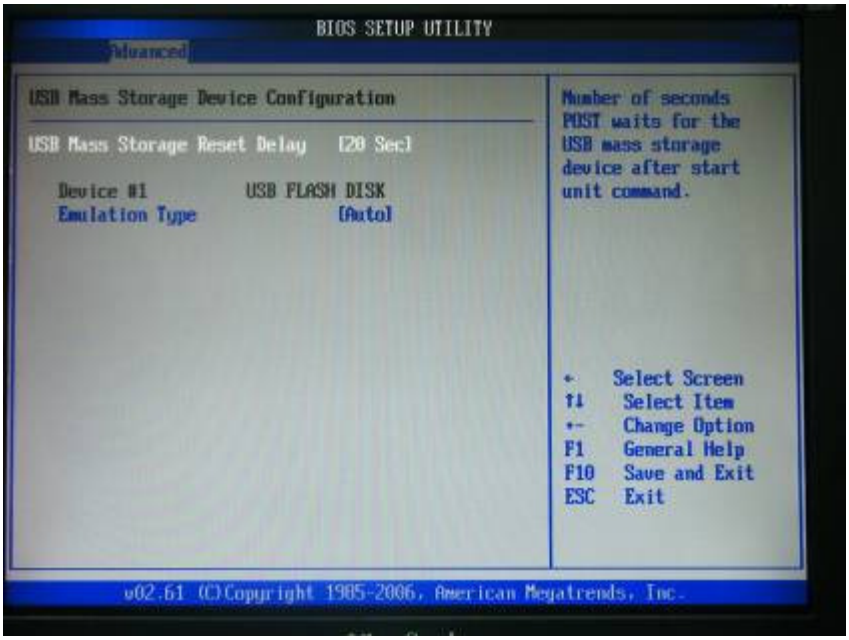
- **VT-UTF8 Combo Key Support**
  Use this item to "Enabled" or "Disabled" VT-UTF8 combination key supports for ANSI / VT100 therminals.
- **Sredir Memory Display Delay**
  This item allows you to indicate the length of time in seconds to off the memory display delay. The default setting is "No delay".

- **USB Configuration**
  You can use this screen to select options for the USB Configuration, and change the value of the selected option. A description of the selected item appears on the right side of the screen.



  - **USB 2.0 Controller Mode**
    Use this item to configure the USB 2.0 controller. The default setting is *HiSpeed*.
  - **Legacy USB Support**
    Use this item to enable or disable support for USB device on legacy operating system. The default setting is *Enabled*.
  - **BIOS EHCI Hand-Off**
    Enabling this item provide the support for operating systems without an EHCI hand-off feature. The default setting is *Enabled*.

- **USB Mass Storage Device Configuration**


BIOS SETUP UTILITY
Advanced
USB Mass Storage Device Configuration
USB Mass Storage Reset Delay [20 Sec]
Device #1 USB FLASH DISK
Emulation Type [Auto]
Number of seconds POST waits for the USB mass storage device after start unit command.
← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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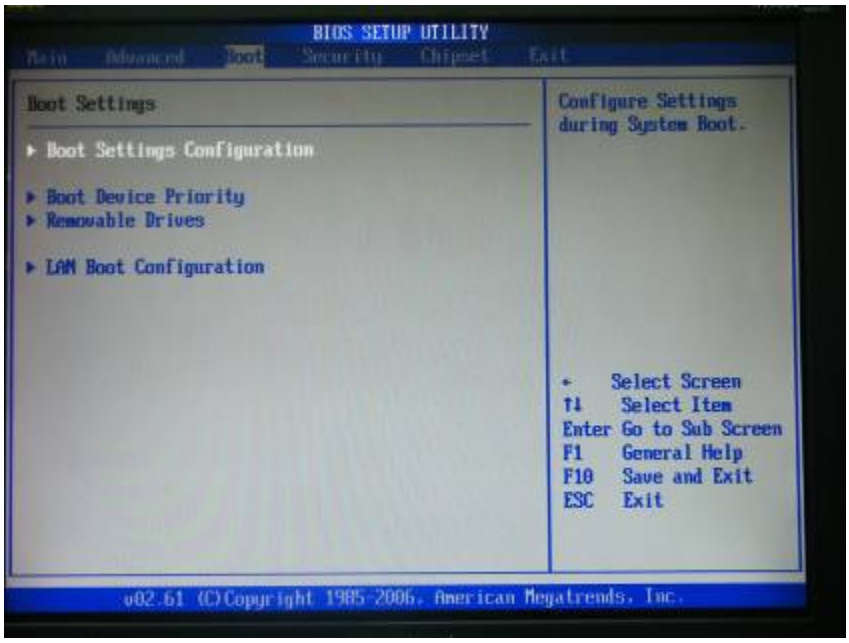
  - **USB Mass Storage Reset Delay**

    USB flash memory drives have replaced floppy disks (and even CD/DVD discs) as the portable storage medium of choice. Like floppy disks, they can also be made bootable, allowing you to install or run operating systems off them. However, some USB flash drive may take too long to initialize and will not be bootable. When set to "20 Sec", the BIOS will wait for up to 20 seconds for the USB flash drive to initialize.

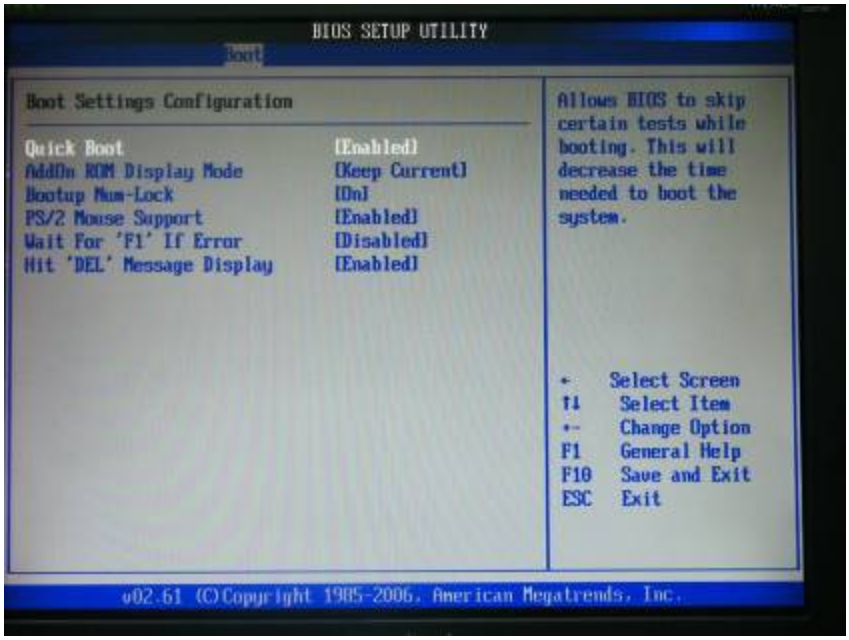
3.5 Boot Menu

The Boot menu allows users to change boot options of the system. You can select any of the items in the left frame of the screen to go to the sub menus:

For items marked with "►", please press <Enter> for more options.



- **Boot Setting Configuration**

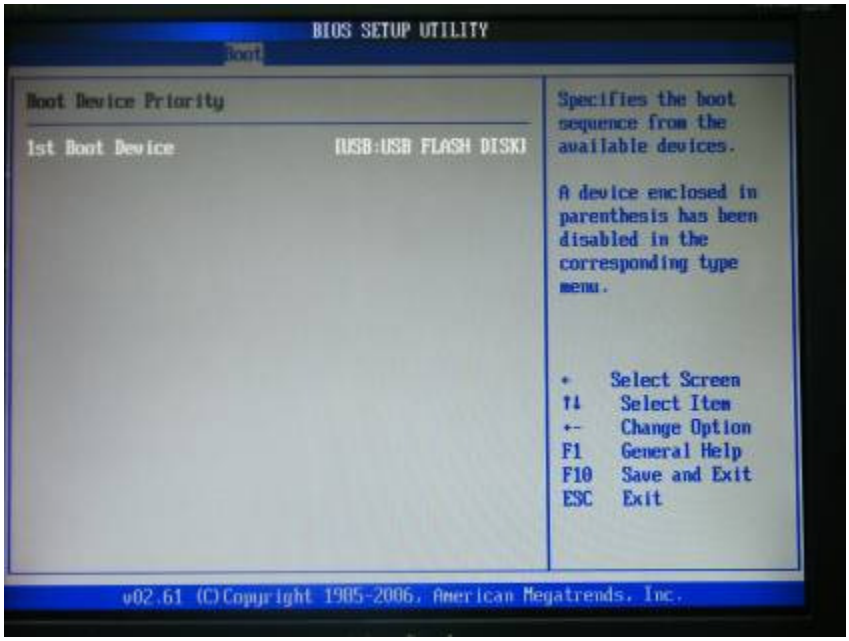

BIOS SETUP UTILITY
Boot
Boot Settings Configuration
Quick Boot [Enabled]
AddOn ROM Display Mode [Keep Current]
Bootup Num-Lock [On]
PS/2 Mouse Support [Enabled]
Wait For 'F1' If Error [Disabled]
Hit 'DEL' Message Display [Enabled]
Allows BIOS to skip certain tests while booting. This will decrease the time needed to boot the system.
← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
v02.61 (C)Copyright 1985-2006, American Megatrends, Inc.

  - **Quick Boot**
    Enabling this item lets the BIOS skip some power on self tests (POST). The default setting is *Enabled*.
  - **AddOn ROM Display Mode**
    This item selects the display mode for option ROM. The default setting is *Force BIOS*.
  - **Boot Num-Lock**
    Use this item to select the power-on state for the NumLock. The default setting is *On*.
  - **PS/2 Mouse Support**
    This item determines if the BIOS should reserve IRQ12 for the PS/2 mouse or allow other devices to make use of this IRQ. Here are the options for your selection, *Auto*, *Enabled* and *Disabled*.

- **Wait For 'F1' Of Error**
  If this item is enabled, the system waits for the F1 key to be pressed when error occurs. The default setting is *Enabled*.

- **Hit 'DEL' Message Display**
  If this item is enabled, the system displays the message "Press DEL to run Setup" during POST. The default setting is *Enabled*.

- **Boot Device Priority**
  Use this screen to specify the order in which the system checks for the device to boot from. To access this screen, select Boot Device Priority on the Boot Setup screen and press "Enter".


BIOS SETUP UTILITY
Boot
Boot Device Priority
1st Boot Device
[USB:USB FLASH DISK]
Specifies the boot sequence from the available devices.
A device enclosed in parenthesis has been disabled in the corresponding type menu.
→ Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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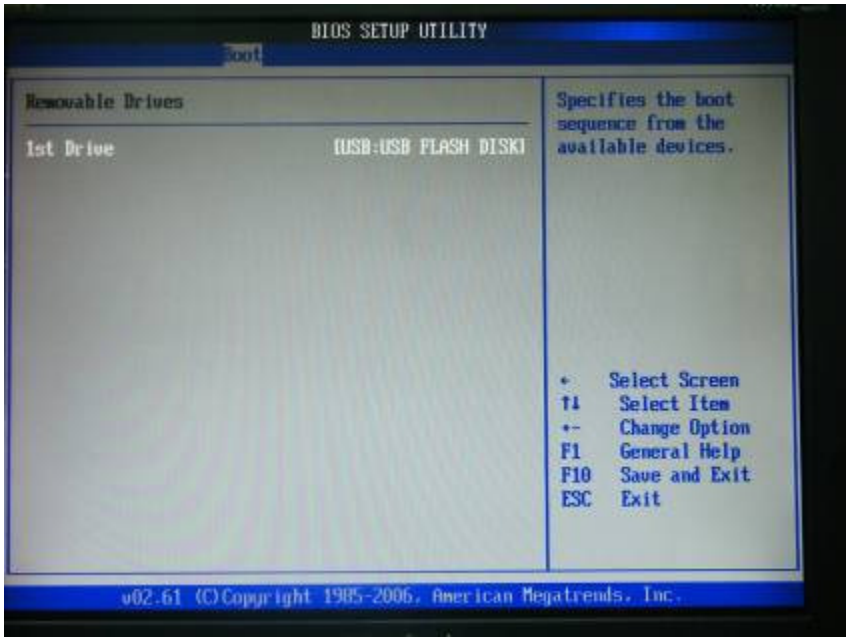
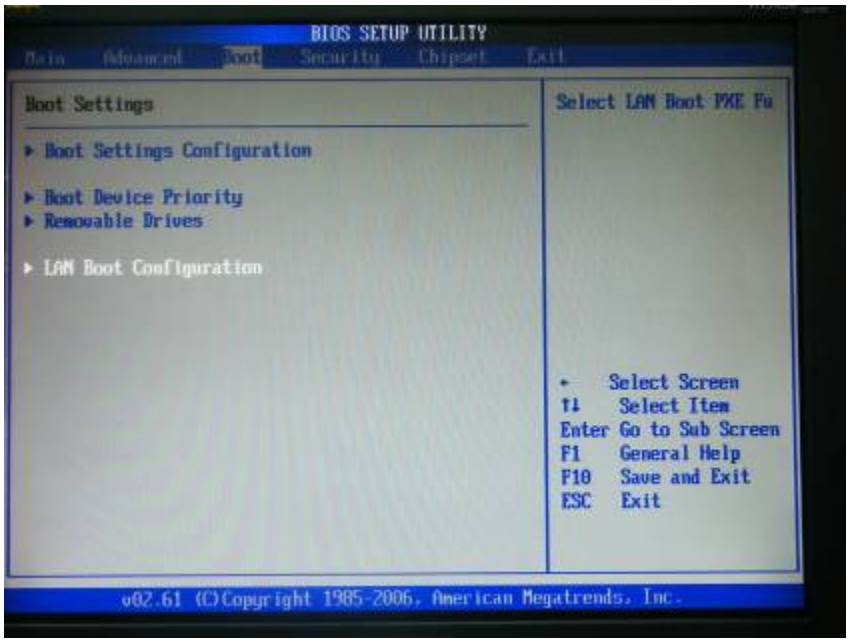
- **Removable Drives**
  Use this screen to view the removable drives in the system. The BIOS will attempt to arrange the removable drive boot sequence automatically. You can also change the booting sequence.

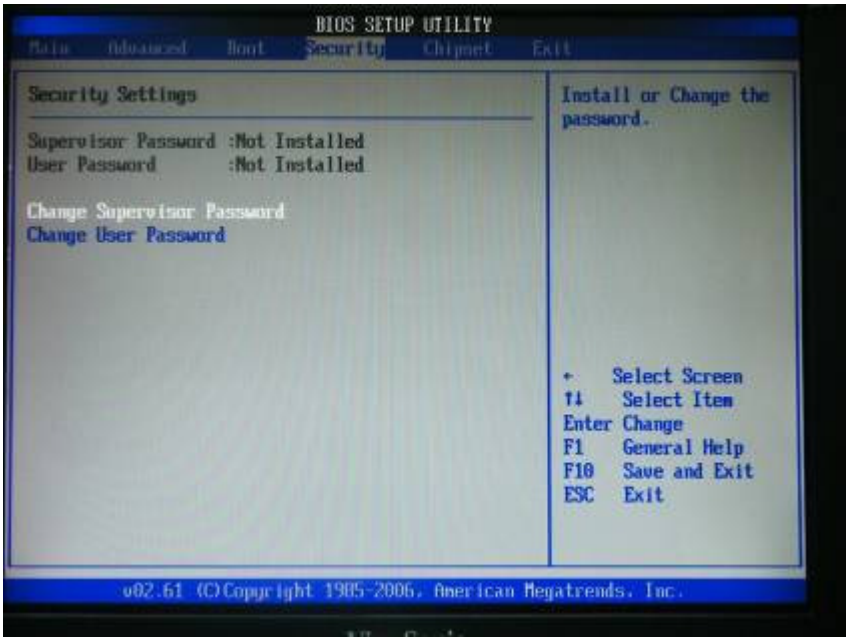


- **LAN Boot Configuration**
  This item allows you to select the value of the LAN boot function.



3.6 Security Menu

The Security menu allows users to change the security settings for the system.



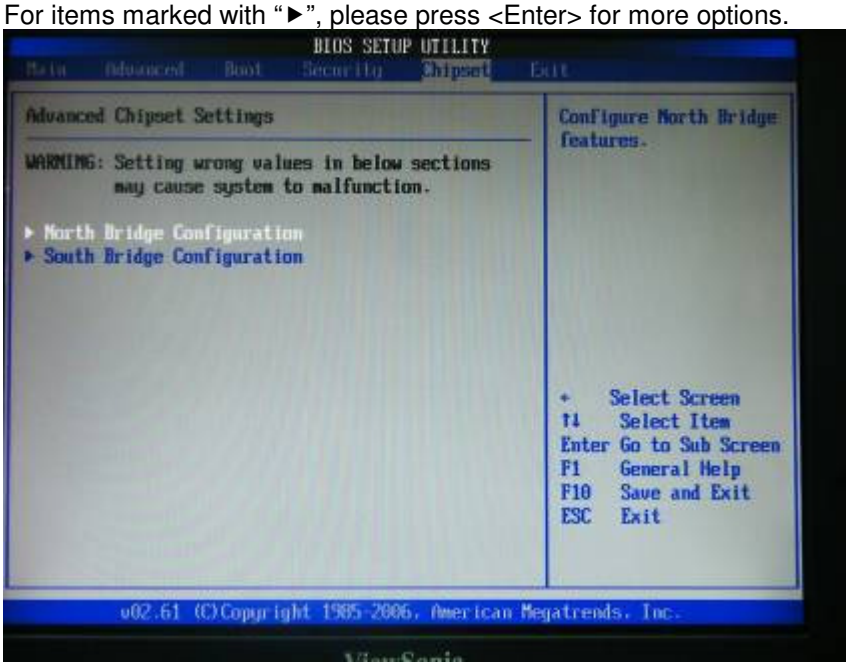
- **Supervisor Password**
  This item indicates whether a supervisor password has been set. If the password has been installed, Installed displays. If not, Not Installed displays.
- **User Password**
  This item indicates whether a user password has been set. If the password has been installed, Installed displays. If not, Not Installed displays.
- **Change Supervisor Password**
  Select and press <Enter> to access the sub menu. You can use the sub menu to change the supervisor password.
- **Change User Password**
  Select and press <Enter> to access the sub menu. You can use the sub menu to change the user password.

3.7 Chipset Menu

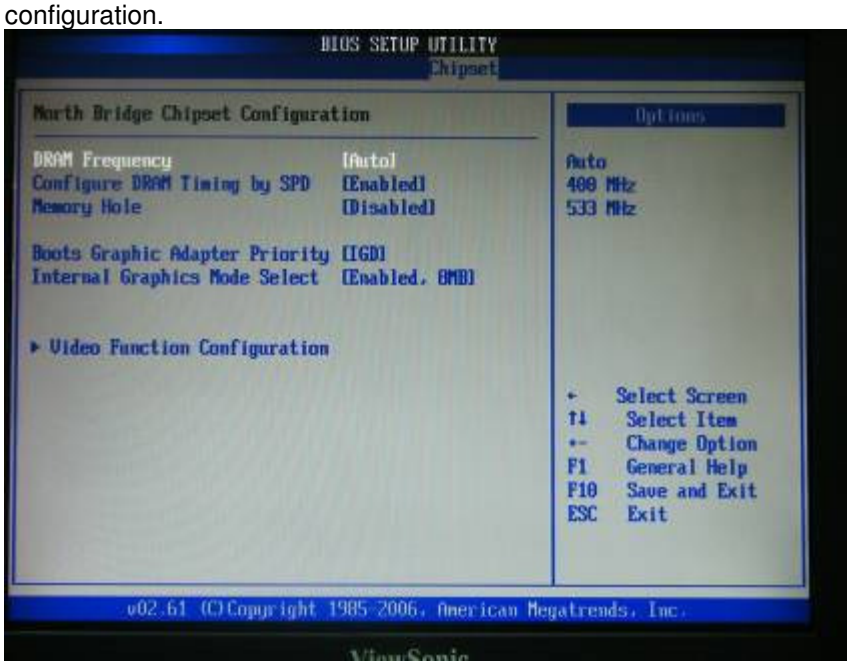
The Chipset menu allows users to change the advanced chipset settings. You can select any of the items in the left frame of the screen to go to the sub menus:

- North Bridge Configuration
- South Bridge Configuration

For items marked with "►", please press <Enter> for more options.



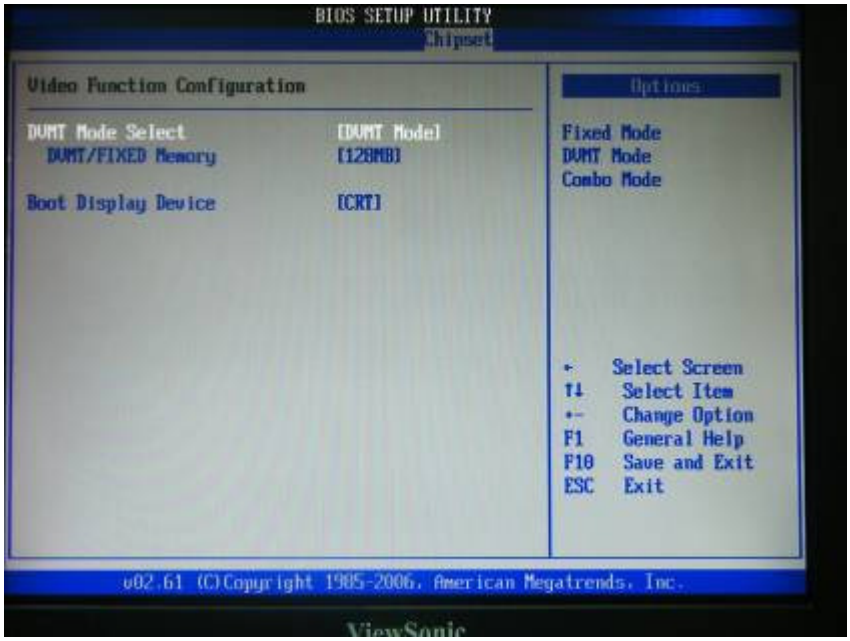
- **North Bridge Configuration**
  You can press <Enter> for more options about your North Bridge configuration.



  - **DRAM Frequency**
    This item allows you to control the Memory Clock.
  - **Configure DRAM Timing by SPD**
    This item can enable or disable DRAM timing by SPD (Serial Presence Detect) device, which is a small EEPROM chip on the memory module, containing important information about the module speed, size, addressing mode and various parameters.
  - **Memory Hole**
    You can reserve this area of system memory for ISA adapter ROM. When this area is reserved it cannot be cached. Check the user information of peripherals that need to use this area o f system memory for the memory requirements. Here are the options, *Disabled* and *15M-16M*.

- **Boot Graphic Adapter Priority**
  This item allows you to select the graphics controller as the primary boot device.
- **Internal Graphics Mode Select**
  This item allows you to select the amout of system memory used by the internal graphics device.

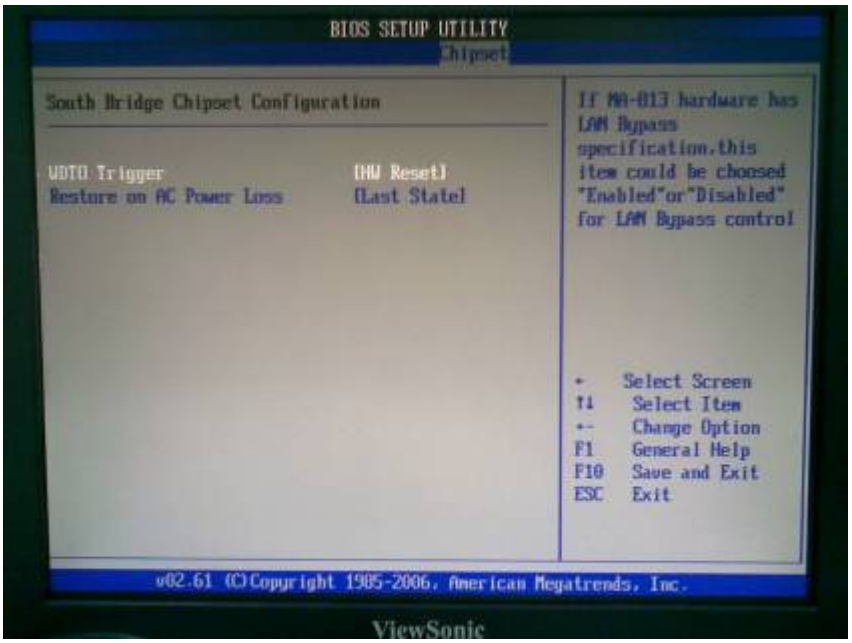
- **Video Function Configuration**
  This item is for setting up the video function.



  - **DVMT Mode Select**

DVMT (Dynamic Video Memory Technology) helps you select the video mode.

- **South Bridge Configuration**


BIOS SETUP UTILITY
Chipset
South Bridge Chipset Configuration
WDTO Trigger [HW Reset]
Restore on AC Power Loss [Last State]
If MA-813 hardware has LAN Bypass specification.this item could be choosed "Enabled"or"Disabled" for LAN Bypass control
→ Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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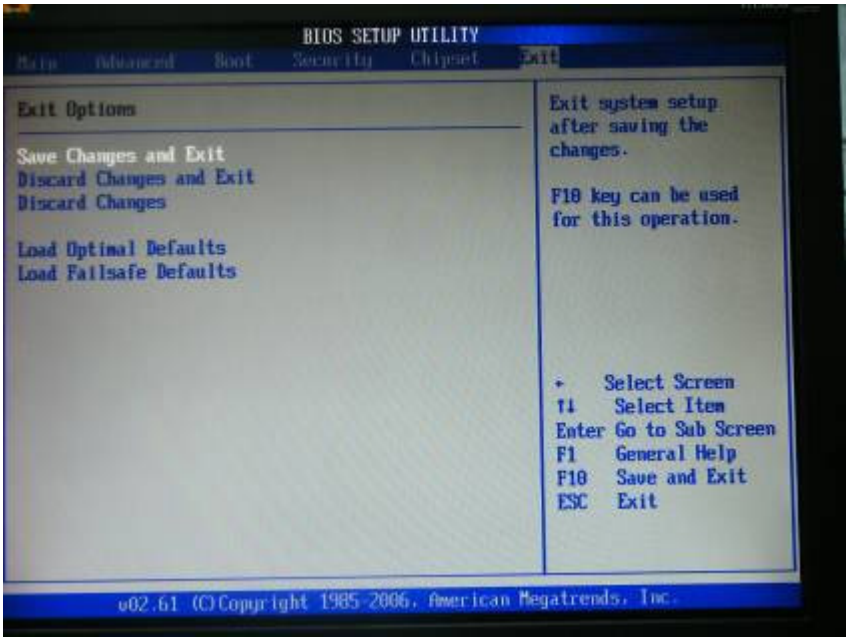
ViewSonic

  - **WDTO Trigger**
    The selections for this item are "HW Reset" / "LAN by pass". If the system hardware has LAN by pass specification, this item could be choosed to enable for LAN by pass control.
  - **Restore on AC Power Loss**
    This item can control how the PC will behave once power is restored following a power outage, or other unexpected shutdown.

3.8 Exit Menu

The Exit menu allows users to load your system configuration with optimal or failsafe default values.



- **Save Changes and Exit**
  When you have completed the system configuration changes, select this option to leave Setup and reboot the computer so the new system configuration parameters can take effect. Select *Save Changes and Exit* from the Exit menu and press <Enter>. Select Ok to save changes and exit.

- **Discard Changes and Exit**
  Select this option to quit Setup without making any permanent changes to the system configuration. Select *Discard Changes and Exit* from the Exit menu and press <Enter>. Select Ok to discard changes and exit.

- **Discard Changes**
  Use this item to abandon all changes.

- **Load Optimal Defaults**
  It automatically sets all Setup options to a complete set of default settings when you select this option. The Optimal settings are designed for maximum system performance, but may not work best for all computer applications. In particular, do not use the Optimal Setup options if your computer is experiencing system configuration problems. Select Load Optimal Defaults from the Exit menu and press <Enter>.

- **Load Fail-Safe Defaults**
  It automatically sets all Setup options to a complete set of default settings when you select this option. The Fail-Safe settings are designed for maximum system stability, but not maximum performance. Select the Fail-Safe Setup options if your computer is experiencing system configuration problems. Select Load Fail-Safe Defaults from the Exit menu and press <Enter>. Select Ok to load Fail-Safe defaults.

APPENDIX A
ENABLING LAN BYPASS FEATURE

What is the LAN by-pass meant for **NA-813 Series**? It doesn't have any down time in network connections for two other network segments (LAN1 and LAN2) when any fetal errors occur to this device.

The LAN by-pass feature covers three levels as below:

1. **Power loss**
   While the AC power loss occurs to this device, the LAN1 and LAN2 still can communicate with each other through hardware relay like as a short cut between two segments. If the power inlet can be normally done, the relay will turn to another correct position.

2. **GPIO control**
   It acts like a switch of the application software. You can enable the hardware relay feature through the GPIO control through the application programs. Then, the software solution provider can be more flexible to make it close with the program.

3. **WDT (Watchdog Timer)**
   The hardware supports the WDT (Watchdog Timer) function. While time-out happens after a defaulted period, the WDT will reset the system or make a short cut for two specific segments by hardware relay.

   Note: Please refer to BIOS " WDT function selection".

The sample codes for the above features can be found in the CD, and they are only for customers' reference as remarked.

APPENDIX B

WARNING

- This is a class B Product. In a domestic Environment this Product may cause radio interference in which case the user may be required to take adequate measures.

- It will be danger if battery is incorrectly replaced. Replacing only with the same or equivalent type is highly recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Warning for Hard Disk Drive Selection:

TUV approved Hard Disk Drive is preferred for TUV compliance Hard Disk drive-Optional, (NWGQ2), generic, Input Voltage rated 5V dc/1.0A, 12V dc/1.8A maximum. Minimum clearance from uninsulated live parts 4.0 mm.

"The equipment is to be installed in an environment with maximum ambient temperature must not exceed 45°C."

"The openings on the enclosure are for air convection hence protected the equipment from overheating.

DO NOT COVER THE OPENINGS."

"Lay this equipment on a reliable surface when install.

A drop or fall could cause injury."

"The equipment shall be installed according to specification as nameplate. Make sure the voltage of the power source when connect the equipment to the power outlet.

The current of load and output power of loads shall be not over the specification.""This equipment must be connected to the reliable earthling before using."

Electric shock hazard inside the redundant power supply

The exchange of modules shall be done by service person.